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Notes:

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Translated: 02:56:41 JST 12/05/2008

Dictionary: Last updated 11/18/2008 / Priority:

CLAIM + DETAILED DESCRIPTION

[Claim(s)]

[Claim 1] In the carbonization equipment which mainly carbonizes an organic waste as a processed material The carbonization furnace of the sealing structure containing the lid which opens and closes the entrance slot and this entrance slot for throwing a processed material into the furnace inside of the body, An exothermic heater means for it to be prepared in the above-mentioned furnace body wall side, to generate heat by energization, and to heat the above-mentioned furnace inside of the body to carbonization temperature, By contacting the air in which an inside includes the shape of a cylinder for Taal, a bad smell, dust, and steam to nothing and this cylindrical inside being introduced downward [of inside tangential adjusting / slanting], and carrying out a lower part flow spirally, from the above-mentioned air to Taal The separation tub which separates dust and steam, and the deodorization equipment connected to the air exhaust port part of this separation tub, The tip in the inside tangential adjusting of the above-mentioned separation tub And the air feeding passage which pointed to the slanting lower part and was supported by the upper end of the above-mentioned separation tub, An air feeding means to feed an air to this air feeding passage, and an end are opened for free passage by the up space of the above-mentioned furnace inside of the body. The other end is connected to the above-mentioned air feeding passage, and it is prepared in the connection part of the air suction passage which attracts the air of the above-mentioned furnace inside of the body which contains Taal, a bad smell, dust, and steam in an operation of negative pressure, and changes the above-mentioned furnace inside of the body into a decompression state, and a this air suction passage and an air feeding passage. Carbonization equipment characterized by equipping the above-mentioned air suction passage with the ejector on which negative pressure is made to act by feeding of the air in the above-mentioned air feeding passage.

[Claim 2] Carbonization equipment according to claim 1 with which the above-mentioned deodorization equipment is constituted by building deodorization adsorption material in the upper part in Demi Starr for waterdrop separation at the above-mentioned air exhaust port part side within a case.

[Claim 3] Carbonization equipment according to claim 1 whose above-mentioned air feeding means is an air compressor.

[Claim 4] In the carbonization equipment which mainly carbonizes an organic waste as a processed material The carbonization furnace of the sealing structure containing the lid which opens and closes the entrance slot and this entrance slot for throwing a processed material into the furnace inside of the body, An exothermic heater means for it to be prepared in the above-mentioned furnace body wall side, to generate heat by energization, and to heat the above-mentioned furnace inside of the body to

carbonization temperature, With a filter material, it is divided to two storage-of-water fields, and in one storage-of-water field Taal from a processed material, The storage-of-water part which stores water in the water containing a bad smell and dust, and stores water in the water from which Taal and dust were separated into the storage-of-water field of another side at least by the above-mentioned filter material, The returning-water passage where an end is prolonged in one storage-of-water field of the above-mentioned storage-of-water part, and the water pump which feeds the water in the storage-of-water field of another side of the above-mentioned storage-of-water part to the above-mentioned returning-water passage, One end is opened for free passage by the up space in the above-mentioned carbonization furnace, and the other end is connected to the water pump lower stream side of the above-mentioned returning-water passage. The air suction passage which attracts the air in the above-mentioned carbonization furnace which contains Taal, a bad smell, dust, and steam in an operation of negative pressure, and changes the inside of the above-mentioned carbonization furnace into a decompression state, Carbonization equipment characterized by having the ejector which is prepared in the connection part of this air suction passage and the above-mentioned returning-water passage, and makes negative pressure act on the above-mentioned air suction passage by feeding of the water in the above-mentioned returning-water passage.

[Claim 5] Carbonization equipment according to claim 4 with which an exhaust air duct is open for free passage in the above-mentioned storage-of-water part with equipment with the up space of the storage-of-water field of above-mentioned another side, and is prepared in it, and deodorization equipment is formed in this exhaust air duct.

[Claim 6] Carbonization equipment according to claim 1 or 4 with which the above-mentioned exothermic heater means covers most and the bottom of a furnace object side wall side of the above-mentioned carbonization furnace, and is established.

[Claim 7] While the tube-like object with which two or more air vents were formed in the bottom in the above-mentioned carbonization furnace at the side, and the tip was blocked is set up and heating the above-mentioned processed material through this tube-like object Carbonization equipment given in either Claim 1 made as [pass / through the inside of the above-mentioned processed material / the heated air in the above-mentioned tube-like object], 4 or 6.

[Claim 8] While the tube-like object with which two or more air vents were formed in the bottom in the above-mentioned carbonization furnace at the side, and the tip was opened wide is set up and heating the above-mentioned processed material through this tube-like object Carbonization equipment given in either Claim 1 made as [attract / the air inside the above-mentioned processed material / through the above-mentioned tube-like object], 4 or 6.

[Claim 9] In the carbonization equipment which mainly carbonizes an organic waste as a processed material The carbonization furnace of the sealing structure containing the lid which opens and closes the entrance slot and this entrance slot for throwing a processed material into the furnace inside of the body, An exothermic heater means for it to be prepared in the side wall side and bottom wall side of the above-mentioned furnace object, to generate heat by energization, and to heat the above-mentioned furnace inside of the body to carbonization temperature, The air suction means which attracts the air in the above-mentioned carbonization furnace, and changes the inside of this carbonization furnace into a decompression state, While it is set up by the bottom in the above-mentioned carbonization furnace, two or more air vents are formed in the side while a tip is blocked, and heating the above-mentioned processed material in response to generation of heat of the exothermic heater means of the above-

mentioned furnace object bottom wall side Carbonization equipment characterized by having the tube-like object with which an internal heating air is sucked out by suction of the air by the above-mentioned air suction means, and passes through the inside of the above-mentioned processed material.

[Claim 10] In the carbonization equipment which mainly carbonizes an organic waste as a processed material The carbonization furnace of the sealing structure containing the lid which opens and closes the entrance slot and this entrance slot for throwing a processed material into the furnace inside of the body, An exothermic heater means for it to be prepared in the side wall side and bottom wall side of the above-mentioned furnace object, to generate heat by energization, and to heat the above-mentioned furnace inside of the body to carbonization temperature, The air suction means which attracts the air in the above-mentioned carbonization furnace, and changes the inside of this carbonization furnace into a decompression state, While it is set up by the bottom in the above-mentioned carbonization furnace, two or more air vents are formed in the side while a tip is opened wide, and heating the above-mentioned processed material in response to generation of heat of the exothermic heater means of the above-mentioned furnace object bottom wall side Carbonization equipment characterized by having the tube-like object which inhales the air inside the above-mentioned processed material inside by suction of the air by the above-mentioned air suction means.

[Detailed Description of the Invention]

[0001]

[Field of the Invention] Especially this invention relates to the equipment which could be made to carry out carbonization processing certainly, without making Taal generated adhere to a furnace inside-of-the-body wall etc. about carbonization equipment.

[0002]

[Description of the Prior Art] Usually, although organic wastes, such as life garbage which comes out from a home, are processed by incineration and reclamation, while a toxic substance, for example, dioxin, becomes with a big problem in incineration, in the case of reclamation, the place which should perform reclamation is being restricted from a relation with an environmental problem etc.

[0003] Then, although the method of decomposing, fermenting an organic waste by a microbe and using as a compost is proposed Promoting fermentation is performed mixing the moisture adjustment material of a woody chip or chaff to an organic waste, and agitating mechanically, since decomposition will advance, if there is much moisture contained in an organic waste.

[0004] However, if a woody chip and chaff are contained, it may be unable to use effectively as an organic fertilizer, and the quality of a compost will not be stabilized, and cannot use in comfort, but the cost of a microbe will become high further.

[0005] Moreover, the method of drying an organic waste as a method of processing an organic waste is also proposed. This dryness processing method has the advantage that the quantity of the waste which should carry out compost processing can be decreased while being able to collect the feed of livestock etc. from waste by classifying and drying at the generating place of an organic waste.

[0006] Furthermore, the method of carbonizing an organic waste as a method of processing an organic waste is proposed. The carbide of an organic waste has stable quality as compared with the processing method by a microbe or dryness. It can be then kept and can also use as soil improvement material, water quality purification material, or deodorization material, and since high temperature heating is

carried out where oxygen is intercepted further, problems, such as a toxic substance, for example, dioxin etc., are not generated, either.

[0007]

[Problem to be solved by the invention] However, when carbonizing an organic waste, it was a problem big if Taal occurs from an organic nature exhaust air thing and this adheres to an inner wall of the kiln etc., when how carbonization processing is checked, it is easy post-processing is not only very complicated, but, and Taal generated is processed will put a carbonization furnace in practical use.

[0008] This invention makes it a technical problem to offer the carbonization equipment which could be made to carry out carbonization processing certainly, without making Taal generated adhere to a furnace inside-of-the-body wall etc. in view of this problem.

[0009]

[Means for solving problem] Then, the carbonization equipment concerning this invention is set to the carbonization equipment which mainly carbonizes an organic waste as a processed material. The carbonization furnace of the sealing structure containing the lid which opens and closes the entrance slot and this entrance slot for throwing a processed material into the furnace inside of the body, An exothermic heater means for it to be prepared in the above-mentioned furnace body wall side, to generate heat by energization, and to heat the above-mentioned furnace inside of the body to carbonization temperature, By contacting the air in which an inside includes the shape of a cylinder for Taal, a bad smell, dust, and steam to nothing and this cylindrical inside being introduced downward [of inside tangential adjusting / slanting], and carrying out a lower part flow spirally, from the above-mentioned air to Taal The separation tub which separates dust and steam, and the deodorization equipment connected to the air exhaust port part of this separation tub, The tip in the inside tangential adjusting of the above-mentioned separation tub And the air feeding passage which pointed to the slanting lower part and was supported by the upper end of the above-mentioned separation tub, An air feeding means to feed an air to this air feeding passage, and an end are opened for free passage by the up space of the above-mentioned furnace inside of the body. The other end is connected to the above-mentioned air feeding passage, and it is prepared in the connection part of the air suction passage which attracts the air of the above-mentioned furnace inside of the body which contains Taal, a bad smell, dust, and steam in an operation of negative pressure, and changes the above-mentioned furnace inside of the body into a decompression state, and a this air suction passage and an air feeding passage. It is characterized by equipping the above-mentioned air suction passage with the ejector on which negative pressure is made to act by feeding of the air in the above-mentioned air feeding passage.

[0010] One feature of this invention attracts the air of the furnace inside of the body containing Taal, a bad smell, dust, and steam, changes the furnace inside of the body into a decompression state, and is that heats to carbonization temperature in the state, and it carbonized the processed material. Since Taal generated from the processed material is sucked out out of a carbonization furnace with an air by this, and it does not adhere to a furnace inside-of-the-body wall and Taal is separated from an air by a separation tub, the post-processing is also very easy.

[0011] Other features of this invention are at the point of having heated the processed material of the furnace inside of the body to carbonization temperature by the exothermic heater means. By this, equipment is simplified and it can miniaturize, and knowledge special to operation of heating equipment becomes unnecessary, and can be operated also to an amateur.

[0012] The feature of further others of this invention is at the point of having connected deodorization

equipment to the air exhaust port part of a separation tub. When an air is emitted to the atmosphere as it is in the case of the structure of this invention, there is a possibility that a bad smell may pose a problem. Then, he is trying to emit the air which deodorized through deodorization equipment to the atmosphere. Although the method in particular of this deodorization equipment is not limited, it is good to build deodorization adsorption material in that upper part, and to constitute Demi Starr for waterdrop separation at the air exhaust port part side on the relation by which steam is contained in the air, and within a case.

[0013] Especially if the air feeding means can feed an air, it will not be limited, but when the case where the carbonization equipment which can move is constituted is taken into consideration, it is good to use an air compressor.

[0014] As long as the separation tub can separate Taal, dust, and steam from an air by contacting having a cylindrical inside, and the air containing Taal, a bad smell, dust, and steam being introduced downward [of inside tangential adjusting / slanting], and carrying out a lower part flow spirally, what kind of tub is sufficient as it. For example, although metal tubs can be used for a separation tub, it is desirable to attach to an inside the mat which may adhere Taal etc., when separating Taal etc. certainly.

[0015] Although the air from a carbonization furnace is introduced downward [of tangential adjusting] to a separation tub and it was made to separate Taal etc. in this invention, the air from a carbonization furnace is introduced underwater and Taal etc. can be separated.

[0016] Namely, the carbonization equipment concerning this invention is set to the carbonization equipment which mainly carbonizes an organic waste as a processed material. The carbonization furnace of the sealing structure containing the lid which opens and closes the entrance slot and this entrance slot for throwing a processed material into the furnace inside of the body, An exothermic heater means for it to be prepared in the above-mentioned furnace body wall side, to generate heat by energization, and to heat the above-mentioned furnace inside of the body to carbonization temperature, With a filter material, it is divided to two storage-of-water fields, and in one storage-of-water field Taal from a processed material, The storage-of-water part which stores water in the water containing a bad smell and dust, and stores water in the water from which Taal and dust were separated into the storage-of-water field of another side at least by the above-mentioned filter material, The returning-water passage where an end is prolonged in one storage-of-water field of the above-mentioned storage-of-water part, and the water pump which feeds the water in the storage-of-water field of another side of the above-mentioned storage-of-water part to the above-mentioned returning-water passage, One end is opened for free passage by the up space in the above-mentioned carbonization furnace, and the other end is connected to the water pump lower stream side of the above-mentioned returning-water passage. The air suction passage which attracts the air in the above-mentioned carbonization furnace which contains Taal, a bad smell, dust, and steam in an operation of negative pressure, and changes the inside of the above-mentioned carbonization furnace into a decompression state, It is prepared in the connection part of this air suction passage and the above-mentioned returning-water passage, and is characterized by having the ejector which makes negative pressure act on the above-mentioned air suction passage by feeding of the water in the above-mentioned returning-water passage.

[0017] Since Taal generated from the processed material in this invention is attracted with an air, and is stored in one storage-of-water field of a storage-of-water part and it is stored in the state where did not adhere to a furnace inside-of-the-body wall, and dissolved in ****, or it ****(ed), the post-processing is also very easy.

[0018] Moreover, it is in the point of having made it attract the air of the furnace inside of the body using the negative pressure at the time of feeding an air or feeding water, in this invention. This does not need a complicated vacuum pump, but check like a vacuum pump becomes unnecessary, and the noise which is further easy to generate at the time of a vacuum pump operation can be canceled.

[0019] The remnants of the supply of food in a cookroom remnants thing [in / here / in an organic waste / ** dining-room or a hotel], ** school, a hospital, etc., ** The food over which the term of a guarantee passed in the supermarket, the department store, the grocery store, etc., ** PET bottles, such as ** drinking water, such as the medical waste which comes out of facilities, such as the sludge originating in industrial waste, the feces and urine which come out of ** stock raising institution, the Biel dregs in a food manufacture institution, white-distilled-liquor dregs, other remnants things, a life kitchen garbage that comes out from ** home, and ** hospital, for example, infectious waste, and a disposable diaper, etc. are contained.

[0020] It is absorbed about the bad smell generated from a processed material by the water in one storage-of-water field of a storage-of-water part, and is separated by the filter material. Therefore, the storage-of-water field of another side of a storage-of-water part can be wide opened to the atmosphere as it is, or can be opened for free passage with the up space of the storage-of-water field of another side, and can prepare an exhaust air duct. In addition, when a bad smell becomes a problem, it is good for an exhaust air duct to form deodorization equipment.

[0021] Although an exothermic heater means is prepared in the wall surface of a furnace object, since heat is not easily transmitted in a vacuum, it is good to prepare not only in the side wall side of a furnace object but in a upper wall side and a bottom wall side.

[0022] It may be made to take out the generated carbide from an entrance slot, and it prepares the extraction mouth which can be opened and closed on a furnace object, and you may make it pick it out from an extraction mouth.

[0023] [an organic waste / in the case of the tofu lees of a multi-moisture system etc., the portion near the side wall side and bottom wall side in a carbonization furnace has early carbonization, but] Deaeration of internal steam is difficult, and the pressure of the time which carbonization takes not only becoming long but an air suction means, for example, an air compressor, is required twice, and is not desirable from a viewpoint of energy saving. On the other hand, while setting up a tube-like object on the bottom of a carbonization furnace, forming many air vents in the side of a tube-like object and heating the inside of a processed material through a tube-like object If the heated air in a tube-like object is passed in a processed material or it is made to attract the air inside a processed material in a tube-like object, a processed material can be carbonized smoothly and carbonization time can be shortened.

[0024] That is, while setting up the tube-like object with which two or more air vents were formed in the bottom in a carbonization furnace at the side, and the tip was blocked and heating a processed material through this tube-like object, it is good to make as [pass / through the inside of a processed material / the heated air in a tube-like object].

[0025] Moreover, while setting up the tube-like object with which two or more air vents were formed in the bottom in a carbonization furnace at the side, and the tip was opened wide and heating a processed material through a tube-like object, it is good to make as [attract / the air inside a processed material / through a tube-like object].

[0026] Furthermore, according to this invention, an organic waste is mainly set to the carbonization equipment carbonized as a processed material. The carbonization furnace of the sealing structure

containing the lid which opens and closes the entrance slot and this entrance slot for throwing a processed material into the furnace inside of the body, An exothermic heater means for it to be prepared in the side wall side and bottom wall side of the above-mentioned furnace object, to generate heat by energization, and to heat the above-mentioned furnace inside of the body to carbonization temperature, The air suction means which attracts the air in the above-mentioned carbonization furnace, and changes the inside of this carbonization furnace into a decompression state, While it is set up by the bottom in the above-mentioned carbonization furnace, two or more air vents are formed in the side while a tip is blocked, and heating the above-mentioned processed material in response to generation of heat of the exothermic heater means of the above-mentioned furnace object bottom wall side The carbonization equipment characterized by having the tube-like object with which an internal heating air is sucked out by suction of the air by the above-mentioned air suction means, and passes through the inside of the above-mentioned processed material can be offered.

[0027] Moreover, according to this invention, an organic waste is mainly set to the carbonization equipment carbonized as a processed material. The carbonization furnace of the sealing structure containing the lid which opens and closes the entrance slot and this entrance slot for throwing a processed material into the furnace inside of the body, An exothermic heater means for it to be prepared in the side wall side and bottom wall side of the above-mentioned furnace object, to generate heat by energization, and to heat the above-mentioned furnace inside of the body to carbonization temperature, The air suction means which attracts the air in the above-mentioned carbonization furnace, and changes the inside of this carbonization furnace into a decompression state, While it is set up by the bottom in the above-mentioned carbonization furnace, two or more air vents are formed in the side while a tip is opened wide, and heating the above-mentioned processed material in response to generation of heat of the exothermic heater means of the above-mentioned furnace object bottom wall side The carbonization equipment characterized by having the tube-like object which inhales the air inside the above-mentioned processed material inside by suction of the air by the above-mentioned air suction means can be offered.

[0028]

[Function and Effect(s) of the Invention] Since Taal of the furnace inside of the body was sucked out out of the carbonization furnace with the air according to this invention, Taal does not adhere to the wall surface of a furnace object, and post-processing of Taal can also be performed very easily.

[0029] Moreover, since the processed material of the furnace inside of the body was heated to carbonization temperature by energization to an exothermic heater means, hardly, and it not only can simplify and miniaturize composition of equipment, but an amateur also feels easy and a domestic housewife etc. can operate it. [knowledge special to operation of an exothermic heater means]

[0030] Furthermore, since the air of the furnace inside of the body is attracted and it was made to change the furnace inside of the body into the decompression state by the negative pressure at the time of feeding of an air or water, it is also rare for noise like [in the case of using a vacuum pump] to pose a problem. As a result, the carbonization furnace of the energy-saving type which is simple and has maintenances can be built.

[0031]

[Mode for carrying out the invention] This invention is hereafter explained in detail based on the example shown in Drawings. the carbonization equipment which drawing 1 and drawing 2 require for this invention is desirable -- it carries out and an embodiment is shown. In the figure, on Floor GL, a cart 10 is installed possible [movement], and the carbonization furnace 20 and the separation tub 30 are

carried on this cart 10.

[0032] the carbonization furnace 20 is constituted using a welding steel pipe as a main part 21 -- the external wall side and a bottom wall side -- the electric heater (exothermic heater means) 22 -- the -- [the whole surface / cover, attach and] mostly Moreover, the lid 23 is supported by the opening-and-closing mechanism 24 of the handle type free [opening and closing] at the upper end opening of the carbonization furnace 20, and, in the carbonization furnace 20, nothing and its upper end opening are the entrance slot 25 into which the organic waste which is a processed material is thrown about sealing structure as a whole. In addition, the generated carbide is taken out from an entrance slot 25.

[0033] Moreover, in the carbonization furnace 20, the steel pipe (tube-like object) 26 is set up by the bottom. As for this steel pipe 26, a lower end is welded to the bottom of the furnace object 21, it is opened wide and, as for the upper end of a steel pipe 26, two or more air vents are formed in the side of a steel pipe 26.

[0034] On the other hand, the separation tub 30 sticks a mat etc. on the inside of a welding steel pipe, and is constituted, a lid 31 is fixed to the upper end of the separation tub 30, the exhaust port part 32 of an air is formed in this lid 31, and deodorization equipment 40 is attached to this exhaust port part 32.

[0035] This exhaust 40 contains the deodorization adsorption material 43 in that upper part, and Demi Starr 42 for waterdrop separation is constituted at the exhaust port part 32 side in housing 41, and the exhaust air duct 44 is being fixed to the upper end of housing 41. The deodorization adsorption material 43 is good to make packing for example, a SEPIO light (brand name), and to enable it to exchange them suitably.

[0036] Moreover, on a cart 10, the air compressor (air feeding means) 50 is carried. The end of the air feeding pipe (air feeding passage) 51 is connected to the air discharge mouth of this air compressor 50, and the tip of this air feeding pipe 51 points on the lid 31 of the separation tub 30 to facing down of the inside tangential adjusting of the separation tub 30, and is attached to it.

[0037] The ejector 52 shown in drawing 2 in the middle of this air feeding pipe 51 is interposed. One end of the air suction pipe (air suction passage) 54 is connected to the Nakama mouth 53 of this ejector 52, and the other end of this air suction pipe 54 is open for free passage with the up space in the carbonization furnace 20, and is connected to the furnace object 21 of the carbonization furnace 20.

[0038] Next, operation is explained. While operating the air compressor 50 after operating the handle of the opening-and-closing mechanism 24, opening the lid 23 of an entrance slot 25, throwing in the processed material W and closing a lid 23 when carbonizing organic wastes, such as a kitchen garbage, it energizes to the electric heater 22 and it is made to generate heat. Then, an air is fed by the air feeding pipe 51 from the air compressor 50, and into the separation tub 30, this air is the inside tangential adjusting, and it points to slanting facing down and is blown.

[0039] In that case, by an ejector 52, negative pressure occurs, this negative pressure acts on the up space in the carbonization furnace 20 through the air suction pipe 54, and the air in the carbonization furnace 20 is attracted by the air feeding pipe 51 through the air suction pipe 54 by feeding of the air in the air feeding pipe 51.

[0040] On the other hand, although the organic waste W which the electric heater 22 generated heat at 390 degrees C - 450 degrees C by energization, and was thrown in in the carbonization furnace 20 is heated at the carbonization furnace 20 Since the inside of the carbonization furnace 20 will be in a decompression state by suction of an above-mentioned air and supply of oxygen from the open air is intercepted, the organic waste W in the carbonization furnace 20 is carbonized.

[0041] By the way, in the case of the tofu lees of a multi-moisture system etc., the portion near the side wall side and bottom wall side in the carbonization furnace 20 tends to carbonize the organic waste W, but about the inside of the organic waste W, it is hard to deaerate steam, and moreover, in the state near a vacuum, the heat from the electric heater 22 is not transmitted easily, and the time which carbonization takes becomes long. On the other hand, since the steel pipe 26 is set up on the bottom in the carbonization furnace 20 in this example Heat is transmitted from the electric heater 22 by the side of the bottom of the carbonization furnace 20 to a steel pipe 26, the heat of a steel pipe 26 is transmitted to the inside of the organic waste W, and an inside is also heated quickly. Moreover, since steam inside organic waste W is sucked out in a steel pipe 26 through an air vent in the negative pressure in the carbonization furnace 20 and steam of the organic waste W is also sucked out quickly by this simultaneously, the organic waste W is carbonized efficiently for a short time.

[0042] From the organic waste W, Taal generates in the shape of steam, and this Moreover, the bad smell in the carbonization furnace 20, It is drawn in by the air feeding pipe 51 through the air suction pipe 54 with steam generated from dust and an organic waste etc., and into the separation tub 30, it points to slanting facing down of the inside tangential adjusting, and blows in.

[0043] Then, [an air / the air containing Taal, dust, steam, etc. carrying out a lower part flow of the inside of the separation tub 30 spirally] Contact the mat of the inner skin of the separation tub 30 (refer to arrow [of drawing 1] A), and the great portion of Taal, dust, and some steam are separated from an air. The air from which the great portion of Taal, dust, and some steam were separated goes into deodorization equipment 40 from the exhaust port part 32, steam is separated by Demi Starr 42, by the deodorization adsorption material 43, a bad smell is adsorbed, and is removed, and an air without a pure bad smell is emitted to the atmosphere from the exhaust air duct 44.

[0044] If Taal and dust collect in the separation tub 30, it can extract from the drain 33 of the separation tub 30, and can process suitably. Moreover, since Taal and dust adhere also to the mat in the separation tub 30, this is exchanged for a new mat.

[0045] Drawing 3 shows the 2nd embodiment. While the upper end of a steel pipe 26 is wide opened in this example and heating the organic waste W through a steel pipe 26 The hot air in a steel pipe 26 is sucked out in the organic waste W through an air vent in the negative pressure in the carbonization furnace 20, and passes, and he is trying to carbonize the organic waste W efficiently for a short time.

[0046] Drawing 4 shows the 3rd embodiment. In a figure, the same mark as drawing 1 and drawing 2 shows the same or a considerable portion. In this example, the carbonization furnace 20 and the water tank (storage-of-water part) 60 are carried on the cart 10. As for the carbonization furnace 20, the lid 23 is supported by the upper end opening of the furnace object 21 free [opening and closing] on the hinge 27.

[0047] On the other hand, the filter material 61 is formed in the water tank 60, and this filter material 61 is supported by water tank 60 inside with the buttress plate 62 made from a punching metal. It is divided at the storage-of-water room (storage-of-water field) of two upper and lower sides, the supplied type water pump 65 is formed in the upper storage-of-water room (storage-of-water field of another side) 63, and the filter material 61 and the buttress plate 62 are equipped with the inside of the water tank 60 on the buttress plate 62.

[0048] The returning-water passage 66 is connected to the returning-water mouth of this water pump 65, and the tip side of this returning-water passage 66 is installed in the storage-of-water room (one storage-of-water field) 64 of the lower part of the water tank 60. An ejector 52 is interposed in the middle of this

returning-water passage 66, one end of the air suction passage 69 is connected to the Nakama mouth 53 of this ejector 52, and the other end of this air suction passage 69 is open for free passage with the space in the carbonization furnace 20, and is connected to the lid 23 of the carbonization furnace 20.

[0049] Moreover, it is divided into two in the middle of the air suction passage 69, and packing 610 is interposed. When a lid 23 is opened, the air suction passage 69 is divided into two by packing 610, opening of a lid 23 is permitted, and when a lid 23 is closed, the air suction passage 69 is connected to one by packing 610.

[0050] Furthermore, the exhaust air duct 611 is connected to the upper end wall surface of the water tank 60, and well-known deodorization equipment 612 is attached to the tip side of this exhaust air duct 611. Moreover, a drainage pipe 613 is connected to the method of a bottom of the side wall side of the water tank 60, and the opening-and-closing valve 614 is interposed while being this drainage pipe 613. One end of the overflow pipe 615 is connected to the drainage pipe 613 by the side of the lower stream of this opening-and-closing valve 614, and the other end of this overflow pipe 615 is connected to the upper part part of the side wall side of the water tank 60. In addition, 616 is a water supply pipe to the water tank 60.

[0051] Next, operation is explained. When carbonizing organic wastes, such as a kitchen garbage, while opening the lid 23 of an entrance slot 25, throwing in the processed material W, closing a lid 23 and operating the water pump 65, it energizes to the electric heater 22 and it is made to generate heat. Then, the water in the upper storage-of-water room 63 of the water tank 60 is fed towards the storage-of-water room 64 of the lower part of the water tank 60 through the returning-water passage 66 from the water pump 65. To the Nakama mouth 53 of an ejector 53, negative pressure occurs by feeding of this water. This negative pressure will act in the carbonization furnace 20 through the air suction passage 69, the air in the carbonization furnace 20 will be attracted at the air suction passage 69, and it will be sent in with the water which has the inside of the returning-water passage 66 fed in the storage-of-water room 64 of the lower part of the water tank 60.

[0052] On the other hand, although the organic waste W which the electric heater 22 generated heat at 390 degrees C - 450 degrees C by energization, and was thrown in in the carbonization furnace 20 is heated at the carbonization furnace 20 Since the inside of the carbonization furnace 20 will be in a decompression state by suction of an above-mentioned air and supply of oxygen from the open air is intercepted, the organic waste W in the carbonization furnace 20 is carbonized.

[0053] Moreover, since the steel pipe 26 is set up on the bottom in the carbonization furnace 20, heat is transmitted from the electric heater 22 by the side of the bottom of the carbonization furnace 20 to a steel pipe 26. The heat of a steel pipe 26 is transmitted to the inside of the organic waste W, and an inside is also heated quickly. Moreover, since steam inside organic waste W is sucked out in a steel pipe 26 through an air vent in the negative pressure in the carbonization furnace 20 and steam of the organic waste W is also sucked out quickly by this, the organic waste W is carbonized efficiently for a short time.

[0054] Furthermore, from the organic waste W, Taal generates in the shape of steam, and this is attracted at the air suction passage 69 with steam generated from the bad smell, the dust, and the organic waste in the carbonization furnace 20 etc., and is sent in with the water in the returning-water passage 66 in the storage-of-water room 64 of the lower part of the water tank 60. Since the filter material 61 is formed among the up-and-down storage-of-water rooms 63 and 64 Taal and dust are stored in the downward storage-of-water room 64, without the ability passing the filter material 61, and the water

with which Taal and dust were separated passes the filter material 61, moves into the upper storage room 63, and is fed with the water pump 65 at the returning-water passage 66.

[0055] Moreover, [while most bad smells sent in in the downward storage-of-water room 64 are absorbed by the water in the downward storage-of-water room 64, the filter material 61 is adsorbed and a part of bad smell moves to the upper storage-of-water room 63 through the filter material 61, but] There is little the quantity, and since it is moreover deodorized by the exhaust air duct 611 with deodorization equipment 612, even if the exhaust air in the water tank 60 is emitted to the atmosphere from the exhaust air duct 611, it hardly becomes a problem.

[0056] If Taal collects in the storage-of-water room 64 of the lower part of the water tank 60, the opening-and-closing valve 614 can be opened, and it can drain from a drainage pipe 613, and can process suitably.

DESCRIPTION OF DRAWINGS

[Brief Description of the Drawings]

[Drawing 1] It is the composition figure showing the desirable embodiment of the carbonization equipment concerning this invention.

[Drawing 2] It is the cross-sectional composition figure showing the constructional example of the ejector in the above-mentioned embodiment.

[Drawing 3] It is the important section composition figure showing the 2nd embodiment.

[Drawing 4] It is the composition figure showing the 3rd embodiment.

[Explanations of letters or numerals]

10 Cart

20 Carbonization Furnace

22 Electric Heater (Exothermic Heater Means)

23 Lid

25 Entrance Slot

26 Steel Pipe (Tube-like Object)

30 Separation Tub

32 Air Exhaust Port Part

40 Deodorization Equipment

41 Housing

42 Demi Starr

43 Deodorization Adsorption Material

50 Air Compressor (Air Feeding Means)

51 Air Feeding Pipe (Air Feeding Passage)

52 Ejector

54 Air Suction Pipe (Air Suction Passage)

60 Water Tank

61 Filter Material

63, 64 Storage-of-water room (storage-of-water field)

65 Water Pump

66 Returning-Water Passage

69 Air Suction Passage

611 Exhaust Air Duct

612 Deodorization Equipment

[Translation done.]